

**REMARKS**

In view of the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

**1. Restriction Requirement**

Applicant notes with appreciation that the Examiner has withdrawn the restriction requirement between Groups I and III inventions in response to a submission filed by Applicant on April 11, 2005.

**2. Rejections under 35 U.S.C. § 112**

The Examiner has also rejected claims 1-5 and 11-17 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Examiner asserted that “[c]laims 1 and 12 stand rejected for claiming amounts of ZrO<sub>2</sub> that are not possible while maintaining the claimed ratio of TiO<sub>2</sub>/ZrO<sub>2</sub> between 2.2 and 4.5. For example if the ZrO<sub>2</sub> content were 2.5 the amount of TiO<sub>2</sub> would have to be at a minimum 5.5 wt% (to maintain a ratio of 2.2) which is outside the claimed range. For compositions to have the claimed TiO<sub>2</sub>/ZrO<sub>2</sub> the maximum amount of ZrO<sub>2</sub> would be 1.59 wt%.  $3.5/1.59 = 2.2$ . Applicants argue one of ordinary skill in the art can determine what compositions fall inside and outside the claimed limitations. This is not persuasive because amounts of ZrO<sub>2</sub> claimed 1.59 wt% to 2.5 wt% are not possible while maintaining the claimed TiO<sub>2</sub>/ZrO<sub>2</sub> ratio. It is not clear whether the claimed TiO<sub>2</sub>/ZrO<sub>2</sub> ratio is a required limitation of the claim if amounts of ZrO<sub>2</sub> are being claimed that are not possible to maintain the ratio.”

**Applicant respectfully traverses this rejection.**

Applicant submits that all claim limitations should be read in light of each other when interpreting the meets and bounds of a claim. Claims 1 and 12 define the amounts of TiO<sub>2</sub> and ZrO<sub>2</sub> in the composition of the claimed glass and glass-ceramic as meeting three conditions:

- (a) TiO<sub>2</sub> 1.8 - 3.5;
- (b) ZrO<sub>2</sub> 0.8 - 2.5; and
- (c)  $2.2 < \frac{\text{TiO}_2}{\text{ZrO}_2} < 4.5$ .

All three limitations must be met for a composition to fall within the claimed range. One cannot consider only one of the three without regard to the other two. One cannot consider only two of the three without regard to the third. One cannot simply consider limitations (a) and (c) without regard to limitation (b) for example. All three must be considered as a whole. The ranges of  $\text{TiO}_2$  and  $\text{ZrO}_2$  with all limitations (a), (b) and (c) taken into consideration are certainly narrower than ranges of them defined by (a) and (b) only. A combination of (a), (b) and (c) constitutes a subset of a combination of (a) and (b) only.

The Examiner appears to have the view that without the limitation (c) above (such as by deleting this limitation from the concerned claims), the current rejection under 35 U.S.C. § 112, second paragraph would be withdrawn. Thus, the Examiner appears to have the view that the ranges of  $\text{TiO}_2$  and  $\text{ZrO}_2$  defined by a combination of (a) and (b) would be definitive under 35 U.S.C. § 112, second paragraph. Indeed it has been allowed in numerous US patents to list only individual component ranges in claims without further defining a range of their ratio. If this larger range as defined by a combination of (a) and (b) is definitive, it is difficult for Applicant to understand why a subset thereof defined by further limiting the combination is not definitive.

The Examiner illustrated the asserted indefiniteness by giving certain examples that clearly do not meet all requirements of (a), (b) and (c). Clearly these examples do not fall within the claimed range of the concerned claims.

Applicant submits that the limitation of  $\text{TiO}_2/\text{ZrO}_2$  in the claims is required limitation of the claim. One of ordinary skill in the art can determine which compositions fall inside and outside of these limitations. One of ordinary skill in the art can easily calculate the permitted range of  $\text{ZrO}_2$  amount in the composition for any given amount of  $\text{TiO}_2$  in the composition and vice versa. Therefore, the meets and bounds of the invention in terms of the amounts of  $\text{TiO}_2$  and  $\text{ZrO}_2$  are clearly defined in this claim.

### **3. Conclusion**

Based upon the above remarks and papers of record, Applicant believes claims 1-5 and 12-17 of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims and a prompt Notice of Allowance thereon.

Applicant believes that no extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response

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timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

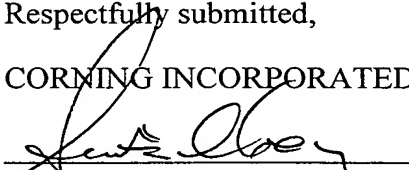
The undersigned attorney is granted limited recognition by the Office of Discipline and Enrollment of the USPTO to practice before the USPTO in capacity as an employee of Corning Incorporated.

Please direct any questions or comments to the undersigned at (607) 248-1253.

Respectfully submitted,

CORNING INCORPORATED

Date: July 5, 2005

  
Siwen Chen

Date of Deposit: 7/5/05

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date indicated above with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

  
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